









# 2012 Submission

The deadline for Chairman's Award submissions is Feb 16, 2012 Noon EST.

Field (Required & Optional)	Summary	Status
Judge This Submission?	<p style="color: red;">This submission will not be judged because you have not yet clicked the Submission Complete button.</p> <p><i>(The Submission Complete button won't appear until you complete the required data.)</i></p>	
Selected Event	Greater Kansas City Regional	
Team Number	2996	
Team Name	The Boeing Company/United States Air Force Academy/Honeywell/Challenger Learning Center/Aeroflex/Vertec Tool, Inc/IEEE/Fastenal & Coronado High School	
Team Sponsors	The Boeing Company United States Air Force Academy Honeywell Challenger Learning Center Aeroflex Vertec Tool, Inc IEEE Fastenal	
Impact on Team Members	<p><b>FIRST INSPIRES MEMBERS</b></p> <ul style="list-style-type: none"> <li>-become involved in school's engineering program &amp; other STEM classes</li> <li>-apply knowledge from STEM courses, providing purpose for classes</li> <li>-increased interest in STEM careers and education</li> <li>-presentation, application, grant writing, and interview experience</li> <li>-share appreciation of STEM with others in community</li> </ul> <p><b>FIRST IMPACTS STUDENTS VIA MENTORS</b></p> <ul style="list-style-type: none"> <li>-improve problem solving skills</li> <li>-teach real world engineering skills</li> </ul>	
Role Model Characteristics	<p><b>STUDENT LED</b></p> <ul style="list-style-type: none"> <li>-student leadership team makes decisions</li> <li>-student built robot</li> </ul>	

	<p><b>CONTINUAL IMPROVEMENT</b>          -increasing number of team members, attendance at all events, community outreach &amp; volunteer work</p> <p><b>TEAM COHESIVENESS</b>          -team like family          -members become close friends          -bond lasts outside of build season &amp; robotics</p> <p><b>SUSTAINABILITY</b>          -solid business plan ensures secure future          -personal sponsor relationships          -sub-team binders made by leadership for future years          -traditions &amp; knowledge passed down</p>	
<p><b>Impact on Community</b></p>	<p>FIRST inspires Team 2996 to go out into the community to increase the appreciation for STEM.          -at least 15,000 people who wouldn't normally interact with robotics were reached through festivals          -Mindstorms kits donated started Robotics Club at Madison Elementary for all grade levels          -helped start 4 FLL teams, 1 FTC team &amp; 1 FRC team          -10+ alumni currently mentoring FIRST teams around nation          -provide other FIRST teams w/ methods of spreading FIRST message          -demonstrations throughout community</p>	
<p><b>Innovative Methods to Spread FIRST</b></p>	<p><b>FOCUS ON YOUNGER GENERATION</b>          -Festivals present opportunity for children to drive our robot &amp; facilitate 1-on-1 interaction with them, resulting in opportunity to talk about specific interests          -Created curriculum for &amp; taught at robotics summer camps          -Demonstrations at 15+ schools, FLL scrimmage &amp; regional, State Fair          -Mentor FLL Teams          -Invited FLL team to the CO FRC Regional, gave a tour of the pits &amp; invited to our shop during build season          -purchased Mindstorms kits for elementary school</p>	
<p><b>Strength of Partnership</b></p>	<p><b>SCHOOL</b>          -supports other organizations (actively and financially)          -recognized as a varsity sport          -strong relationship with Student Council</p> <p><b>PERSONAL SPONSOR RELATIONSHIPS</b>          -student presentations          -invite to team events throughout the year          -sponsors invite team to participate in events year-round</p>	

	<p><b>COMMUNITY</b></p> <ul style="list-style-type: none"> <li>-actively seek and participate in community service and outreach</li> <li>-established name in community (organizations request our participation and future attendance)</li> </ul>	
<b>Communication Methods</b>	<p><b>WITHIN TEAM</b></p> <ul style="list-style-type: none"> <li>-emails, weekly leadership meetings, weekly off-season team meetings, full team design briefs during build season</li> </ul> <p><b>WITHIN COMMUNITY</b></p> <ul style="list-style-type: none"> <li>-website with blogs (team2996.com), team Facebook &amp; Twitter accounts</li> <li>-school recognition</li> <li>-appearances in 20+ newspaper articles &amp; 7 news broadcasts</li> <li>-media invited to Sponsor &amp; Parent Dinner</li> </ul> <p><b>PROSPECTIVE MEMBERS</b></p> <ul style="list-style-type: none"> <li>-booth at school registration for recruitment, followed by the Annual Welcome BBQ open to students, friends, and family</li> </ul>	
<b>Other Considerations</b>	<p><b>STUDENT RUN</b></p> <ul style="list-style-type: none"> <li>-strong mentor base, still completely student ran</li> <li>-students organize community service &amp; presentations, write grant applications, design &amp; build robot</li> </ul> <p><b>TEAM PASSION</b></p> <ul style="list-style-type: none"> <li>-passionate about success (attendance: consistently high)</li> <li>-energy during build season continues through struggles (have fun while being graciously professional)</li> <li>-extraordinary competition spirit (school mascot, face paint, constant dancing &amp; cheering)</li> <li>-whole team adopted "EFY Dance" and performs it at competition</li> </ul>	
<b>Main Essay</b>	<p>In the fall of 2008, 2 dozen clueless teenagers and a few daring adults enthusiastically gathered as a group who would later become FIRST Robotics Competition Team 2996: Cougars Gone Wired (CGW). During our rookie year, we named our disorganized team structure our "business plan" and attempted to build a functioning robot. At our first competition, other teams astounded us- the sophistication of their robots, the energy of their members, and the altruism of their outreach. We gained insight on FIRST's mission through our interactions with other teams, and we embraced Coopertition &amp; Gracious Professionalism (GP). They inspired us to establish our foundation. We realized that</p>	

FIRST was not just about building robots, it was about building connections within our team and with the community. One of the first steps we took was modifying our team structure.

CGW, a student led, year-round team, is now modeled after an engineering firm to foster the professionalism and sustainability of our team. Students fill out applications for a position on 2 sub-teams: 1 of 4 business & 1 of 7 technical. Participating in 2 separate sub-teams enables each member to get the full FIRST experience by gaining a well-rounded knowledge of the business & technical aspects of engineering. 2016 has 1 Chief Executive Officer, 1 Chief Financial Officer, and 1 Vice President for each of the 11 sub-teams. To obtain a leadership position, students must submit a resume & a cover letter and be interviewed by mentors. This process gives us confidence & experience in the job and college application process.

Mentors & alumni are integral parts of our team. Regardless of how much they want to, our team has strict guidelines prohibiting mentors, some of whom are from our sponsoring companies, from touching the robot. Instead, mentors provide guidance & support. They are our role models & friends. We even have nicknames, like Murphbomb for Mr. Murphy and The Big Kahuna for Mr. McLean, for these intelligent adults. Our alumni visit and speak to the impact FIRST has had on their lives. Oftentimes, these former teammates become mentors for our team or for other teams. Many of our alumni are pursuing STEM majors. They are proof of the effect FIRST has on participants' futures.

FIRST Robotics allows us to apply the knowledge gained from STEM classes in real-world situations. This fosters a love of these subjects in students that would not normally take interest in STEM. Our seniors are looking at careers not only in the diverse fields of engineering, but also in medicine, computer science, physics, and chemistry. Not only has our team built a solid infrastructure for the future of CGW, but FIRST has also provided a gateway for building the foundation for the professional success of each member.

CGW actively welcomes students of diverse backgrounds & interests. We make sure that all students in our district, not just those in engineering classes, are aware of the opportunities we present. We personally invite students to

our Annual Welcome BBQ, and we have booths at registration and 8th grade open house.

2996 has worked hard to achieve varsity sport status at Coronado. As of this fall, students are eligible for a varsity letter if they meet requirements. Student Council invites us to stand alongside sports teams at assemblies and to have a float in the homecoming parade. The notoriety we have gained has enabled us to better serve our school community. In 2010, we sponsored a lunch game for the Harvest of Love Food Drive. 2996 allowed fellow students to grace us with cheese beards or pelt us with marshmallows in exchange for a \$1 donation. At Student Council's 2011 Fall Festival, we ran 2 booths of science-inspired activities for young children. In 2012, we held a Chick-Fil-A Fundraiser to save the city's only homecoming parade, again jointly with Student Council. This year, we donated to Cougars Care, an organization that provides financial aid & basic necessities for Coronado students. As an official school team, CGW is proud to be 1 of the most active organizations on campus.

In addition to our visible presence in our school, 2996 contributes to the Colorado Springs community. In 2010 & 2011, we participated in the American Heart Association's Heart Walk and the Susan G. Komen Race for the Cure. In May of 2010 & 2011, we volunteered at Care and Share's local warehouse, sorting food from the Stamp Out Hunger Food Drive. In December of 2011, we participated in a Habitat for Humanity Build Day to utilize our construction skills to serve the community. These events further our goal of improving our local community.

CGW is dedicated to involvement in 3 levels in the FIRST community. In our 4 short years, we have helped develop 4 FLL teams in Colorado Springs. Though our budget is tight, we covered the registration & equipment fees for 1 fledgling FLL team. We have mentored 3 other teams over the past 3 years, and from 2009-2011, we organized and ran a scrimmage held at a local middle school. We built the field elements for the Southern Colorado FLL Regional, and in 2010 & 2011, nearly all of our members volunteered at this event, and our CEO was the 2011 co-MC.

Our 2nd level of involvement in FIRST is through the FTC Team 3635, which acts as our junior varsity. 2996

established this team that is now run by an FRC alumnus & teachers to provide freshman with the opportunity to have hands-on experience before taking on the intensity of the varsity FRC team. FTC members are supported & mentored by FRC members and are encouraged to be a part of FRC as well. We hope that the FRC spirit of competition catches and transfers to their regional event.

CGW strives to embody the spirit of GP and Coopertition that we aim to instill in Team 3635. This penchant for helping other teams was ignited in us when Team 662 contributed to our formation. Because of their generosity, we have become sister teams. When 662 requested our aid in minibot design in 2011, we invited them to our shop to discuss our design. We also share our knowledge of community events and encourage their participation. For example, in the spring of 2011, we were unable to accept the invitation to the Cool Science Festival but recommended that the organization invite 662.

We continue to pay forward the assistance from 662 by guiding FRC teams whenever possible. We aided rookie team 4068 in their establishment. In 2011, upon request, we sent our award-winning business plan to teams 662, 1717, and 3510. Also in 2011, we hosted and invited local FRC teams to an activity called Sea Perch. Groups of 3 students from different teams built submarine robots for a friendly competition, fostering camaraderie. After the event, we donated the submarine kits to the participating teams and encouraged them to sponsor Sea Perch events for middle school students. This year, we are running The State Pre-Ship Date Scrimmage: an event that has proven vital to the success of Colorado teams in years past. We also host an annual strategy conference for Colorado Springs FRC teams who cannot attend multiple regionals. We share the knowledge gained from our first regional of the season. This year, we will be extending this invitation to teams from neighboring cities, including 4068. Our frequent interaction with FIRST teams has laid groundwork for lasting alliances and friendships.

We also cultivate personal relationships with our sponsors. During build season, we invite them & their families to Kickoff, our build sessions, and culminate the season with the Sponsor/Parent Dinner. In the off-season, we give presentations to our sponsors about our season and send

them team pictures. Our sponsors also request our support throughout the year. NAWIC invited us to participate in the 2010 & 2011 Pikes Peak or Bust Rodeo Parade as a part of their float. In the summer of 2011, USAFA Research had us present to 2 different groups of teachers at their STEM Boot Camp. On January 13, 2012, they also highlighted us as 1 of 6 sponsored organizations at their STEM presentation to Governor John Hickenlooper. We met him, demonstrated our robot, and presented our team & our STEM promotion.

We spread our love of STEM subjects through our outreach, positively impacting the way society views these fields. We regularly demonstrate our robot in the community, and the number of requests we receive for our presentations grows exponentially each year. We have reached countless people of all ages from across Colorado through our demonstrations in various schools, districts, and even at the Colorado State Fair. In the fall of 2010 & 2011, we participated in the Cool Science Festival and Imagination Celebration's "What If?" Festival, providing us a way to communicate with thousands of people on a personal level. We allowed children to drive our robot, igniting the priceless light of inspiration in their eyes. Our team has run 5 week-long summer camps at middle schools, teaching with Lego Mindstorms kits, simulating the FLL environment. This year, we purchased Mindstorms kits for Madison Elementary, a school in our district with a lower socioeconomic populous. We plan to purchase more hands-on STEM-related kits for elementary & middle schools, helping students to view STEM subjects in a brighter light. We are building the foundations for a community of people who will further their interest in STEM subjects.

After only 4 years, CGW has created a sustainable team through our team structure and our involvement of mentors, alumni, and sponsors. We have established our name in our school by helping existing foundations grow. We enjoy carrying the spirit of FRC into FLL and FTC and living it year-round by helping other FRC teams. We have inspired our community to love STEM subjects through our outreach. 2996 constantly builds foundations for the continual growth of our team and the increasing appreciation of STEM in our community.

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